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COMPARISON OF A MINIMALIST APPROACH TRANSFEMORAL TAVR WITH STANDARD APPROACH TRANSFEMORAL TAVR IN A US CENTER

Oral Contributions
Room 202 B
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Session Title: Transcather Valve Therapies II
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Background: As transfemoral (TF) TAVR experience increases, specialized centers may consider performing TF TAVR without general anesthesia, TEE, or a surgical hybrid room. The purpose of this study was to evaluate our outcomes with a minimalist approach TF TAVR (MA-TF) compared with current standard approach (SA-TF).

Methods: Patients (pts) that underwent elective, percutaneous TF TAVR utilizing the Edwards Sapien valve from November 2010 to September 2013 were studied. All MA-TF pts were performed with conscious sedation and transthoracic echo in a catheterization laboratory. SA-TF pts were performed in a hybrid OR with general anesthesia and TEE. Baseline characteristics and outcomes of MA-TF and SA-TF were compared using VARC-2 definitions. Cost was calculated for index procedure hospitalization.

Results: 142 pts were studied (MA-TF, n=70 and SA-TF, n=72). There were no differences in baseline comorbidities (STS 10.6±4.3 vs 11.4±5.8, p=0.35) between groups. All procedures in the MA-TF group were successful; one pt was intubated. Three pts in the SA-TF group had a procedural-related death: massive aortic insufficiency despite a second valve placement and 2 pts with major vascular complication. Procedure room time (150±48 vs 218±56 min, p<0.001), total ICU time (22 vs 28 hours, p<0.001), length of stay from procedure to discharge (3 vs 5 days, p<0.001), and cost ($45,485 ± 14,397 vs $55,377±22,587, p<0.001) were significantly less in the MA-TF group. Mortality at 30 days was less in the MA-TF group (0 vs 4%, p<0.001) but 30-day stroke or TIA were similar (4.3vs1.4%, p=0.35). Moderate or severe paravalvular leak and device success were similar between MA-TF and SA-TF groups (3 vs 5.8%, p=0.4 and 90 vs 88%, p=0.79) at 30 days. At median follow-up of 435 days, there was no significance in mortality (82 vs 83%, p=NS).

Conclusions: MA-TF can be performed with minimal morbidity and mortality and comparable outcomes to SA-TF. The shorter length of stay and lower resource utilization with MA-TF significantly lowers costs for TAVR centers.